APPENDIX C
CLAIM SUPPORT IN
APPLICATION NO. 08/604,161

1. A minimally invasive coronary anastomosis procedure for a blocked coronary artery of a heart, the procedure comprising:	See, e.g., figures 1-2, 8-10, 11-12, 13-16, 19, and 20; page 11, lines 3-8: " Referring now in detail to the drawings, therein illustrated is a novel access platform that facilitates the dissection of an internal mammary artery (IMA), including both proximal and distal dissection, and access to the heart during a "beating heart" Coronary Artery Bypass Graph (CABG) procedure by increasing the surgeon's working space and visual access."
providing an incision in an intercostal space between two ribs of a patient, the incision providing access to a selected anastomosis site;	See, e.g., figure 1; page 11, lines 11-13: "An incision in the patient's chest P adjacent to the LIMA (shown in phantom) exposes an LAD artery on the exterior of the patient's heart."
inserting a spreader device between the two ribs, the spreader device having a first end for engaging the first rib and a second end for engaging the second rib;	See, e.g., page 18, lines 10-19: "In operation, the blades 50 and 51 are positioned within the incision in the patient's chest P such that the vanes 52 and 53 slide under the patient's ribs R (see Figs. 6 and 7). The throats 54 and 55 of the blades 50 and 51 receive and substantially surround the opposing ribs proximal to the incision in the patient's chest P. Once the blades 50 and 51 are in position, the blades 50 and 51 are connected to the rest of the access platform 10 by inserting the stems 62 and 63 of the blade arms 56 and 57 into the sockets 34 and 35 in the torque bases 32 and 33;"
	Page 22, line 18-Page 23, line 3: "In operation, blades 140 and 141 are inserted in an incision in the patient's chest such that the blade vanes 142 and 143 slide under the patient's ribs and the recessed throats 144 and 145 of blades 140 and 141 receive the ribs that are proximal to the incision. After the blades 140 and 141 are properly positioned, the stems 152 and 153 of the blade arms 146 and 147 are inserted into the sockets 154 and 155 of the torsional members 130 and 131 to connect the blades 140 and 141 to the remainder of the access platform 110. Levers 126 and 125 are then rotated to drive the pinions 121 and 122 over the rack 120 to laterally retract the ribs;"
	Page 25, lines 16-24: "In operation, the blades 230 and 231 are inserted into the chest incision and positioned such that the vane sections 232 and 233 slide under the patient's ribs R and the recess throat sections 234 and 235 receive the patient's ribs R proximal to the incision. Once the blades 230 and 231 are properly in place, the stems 240 and 241 of the blade arms 236 and 237 are inserted into the sockets 217 and 219 of the pinion housings 216 and 218. Next, the levers 224 and 226 are rotated to the drive pinions 220 and 222 along the rack 214 to laterally retract the ribs;"
	Page 31, lines 5-10: "In operation, the access platform 410 is positioned such that the blades 370 and 372 can be inserted into an incision in a patient's chest and then attached to the blade arms 374 and 376. Once the blades 370 and 372 are positioned in the incision and attached to the blade arms 374 and 376, the lever 426 is rotated to spread the blades 370 and 372 and the patient's ribs apart;"

	Page 32, lines 8-13: "In operation, the blades 532 and 530 are inserted into an incision in the patient's chest and then the stems 526 and 528 of the blade arms 528 and 548 are inserted in the sockets 524 and 544. The lever 538 is rotated to drive the pinion 536 along the rack 520 until the blades 532 and 550 and the patient's ribs are positioned at a desired spacing."
lifting the spreader device such that the second and juxtaposed ribs are elevated with respect to the first rib thereby exposing an internal mammary artery sufficiently for direct visualization;	See, e.g., page 18, line 20-Page 19, line 16: "Next, the hub 14 of the spreader member 12 is rotated to laterally spread the spreader arms 18 and 19 apart until the blades 50 and 51 have retracted the patient's ribs R to a desired spacing. The support pads 80 and 81 are then lowered to rest on the patient's chest and locked in place with lock positioners 90 and 91. At this point, the torque bases 32 and 33 are rotated relative to the torsional members 30 and 31 to displace in an essentially vertical direction the blades 50 and 51, and ultimately the patient's ribs R, relative to each other. As the blade 51 is raised, the corresponding support pad 81 depresses the patient's sternum to further cause a greater deflection in the patient's rib cage and, thus, increase the "tunnel" effect. The elongated vane construction of the blades 50 and 51 advantageously enables the access platform 10 to vertically raise a plurality of the patient's ribs R to cause a greater "tunnel" effect under a patient's rib cage and, thus, increases the surgeon's working area and visual access to the IMA. The recessed throat construction of the blades 50 and 51 advantageously enables the access platform 10 to vertically displace the opposite rib that is proximal to the chest incision downwardly to further increase the surgeon's visual access. This combined motion helps to create an optimized tunnel;"
	Page 23, lines 3-15: "When a desired spacing between the retracted ribs is met, the support pads 160 and 161 are positioned on the chest of the patient, with support pad 160 being preferably positioned on the patient's sternum. The levers 138 and 139 then are rotated to drive pinions 136 and 137 to draw the curved racks 132 and 133 through the pinion housing 134 and 135 to vertically displace the blades 140 and 141 and the retracted ribs. As the blade 140 is retracted upwards the support pad 160 preferably depresses the sternum creating a greater deflection in the patient's rib cage and, thus, creating a greater "tunnel" effect underneath the patient's rib cage, to increase the surgeon's working space and visual access for dissection of the IMA;"
	Page 25, line 24-Page 26, line 4: "The "L"-shaped lever 256 is then rotated downwardly toward the patient's chest such that the slide portion 259 slides along the support pad 252 while the "L"-shaped lever 256 pivots about the pivot 258. As a result, one end of the rack 214 is raised to vertically offset blade 230 relative to 231;"

	Page 27, line 23-Page28, line 13: "In operation, the blade 384 is positioned such that the throat 388 captures the blade 350 or 352 of the access platform 310. As the throat 388 captures the blade 350 or 352 the elongated vane 386 extends under a plurality of the patient's ribs to be offset. The pivot base 377 and the pivots 378 and 380 enable the pry bar 370 to be adjustably positioned about two different axes of rotation. Once the blade 384 is positioned, the sternal pad 374 is adjustably located to atraumatically conform the pry bar 370 to the anatomy of the patient. Once the sternal pad 374 is in position, a handle 375, in the upper portion of the "S"-shaped body 372, is pulled to pivot the pry bar 370 about the sternal pad 374 and lift the blade 384 and the blade 350 or 352 of the access platform 310 to offset the patient's ribs and create a "tunnel" to increase the surgeon's working space and visual access for the dissection of the IMA;"
	Page 31, lines 11-14: " The blades 370 and 372 can be effectively offset by rotating the outer hubs 363 and 367 relative to the inner hubs 361 and 365. A wrench 368 attaches to the outer hubs 363 and 367 to rotate the outer hubs 363 and 367;"
	Page 32, lines 13-17: " A spring loaded lock lever 534 pivotally mounted to the housing 540 locks the housing 540 in place along the rack 520. The rack 520 is then lifted by the hand 552 to vertically displace or offset the blades 532 and 550 and the patient's ribs."
dissecting the internal mammary artery; and	See, e.g., page 20, lines 3-9: "In a first offset position, the blade 51 raises the retracted ribs and the blade 50 depresses the retracted ribs so that the surgeon can take down the proximal portion of the IMA. Next, the blades 50 and 51 are rotated to a second offset position wherein the blade 50 raises the retracted ribs and the blade 51 depresses the retracted ribs. In this offset position, the surgeon takes down the distal portion of the IMA;"
	Page 23, line 25-Page 26, line 4: "In a first offset position, the blade 141 would raise the retracted ribs and the blade 140 would depress the retracted ribs so that the surgeon can take down the proximal portion of the IMA. Next, the blades 140 and 141 are rotated to a second offset position wherein the blade 140 lifts the retracted ribs and the blade 141 depresses the retracted ribs. In this offset position, the surgeon takes down the distal portion of the IMA."
performing the anastomosis through the incision using the internal mammary artery.	See, e.g., page 20, lines 9-13: "With the dissection of the IMA complete, the surgeon levels the blades 50 and 51 and then engages the heart stabilizer 67. With the heart stabilizer 67 engaged to minimize the movement of the heart, the surgeon performs an arteriotomy and an anastomosis;"
	Page 24, lines 8-10: " With the heart stabilizer 67 engaged to minimize the movement of the heart, the surgeon performs an arteriotomy and anastomosis."

2. The procedure of claim 1 wherein the patient is positioned on a surgical table, and wherein the spreader device is lifted using a lifting mechanism that is mounted to the surgical table and extends upwardly to a position above the patient.	See, e.g., figure 19; Page 30, line 4-Page 31, line 14: "Turning to Figure 19, a seventh embodiment of the access platform 410 of the present invention is shown. The access platform 410 mounts to the table or rail via slides 438 and 440 that locked in place by positioners 450 and 452. The slides 438 and 440 rotatably retains pinions 442 and 444 driven by levers 446 and 448 and slidably received stachion racks 430 and 432. The stachion racks 430 and 432 include rack gears 434 and 436 that operably couple with pinions 442 and 444. The levers 446 and 448 are rotated to drive the pinions 442 and 444 along rack gears 434 and 436 to adjust the height of the stachion racks 430 and 432 relative to the table or patient. A pinion housing 422 is attached to the stachion rack 432 towards its upper end. A rack 420 is attached at one end to stachion rack 430 and is slidably received in the pinion housing 422. A pinion 424 driven by a lever 426 is rotatably retained in the pinion housing 422 and operably connected to the rack 420. The lever 426 is rotated to drive the pinion 424 along the rack 420 to spread apart the stachion racks 430 and 432 and effectively a patient's ribs.
	Torsional members 360 and 362 are attached to the top of the stachion racks 430 and 432. Blade arms 374 and 376 extend outwardly from torsional members and attach to blades 370 and 372. The torsional members comprise inner hubs 361 and 365 rotatably received in and operably connected to outer hubs 363 and 367. Locking levers 364 and 366 lock the outer hubs 363 and 367 in place relative to the inner hubs 361 and 365. In operation, the access platform 410 is positioned such that the blades 370 and 372 can be inserted into an incision in a patient's chest and then attached to the blade arms 374 and 376. Once the blades 370 and 372 are positioned in the incision and attached to the blade arms 374 and 376, the lever 426 is rotated to spread the blades 370 and 372 and the patient's ribs apart. The blades 370 and 372 can be effectively offset by rotating the outer hubs 363 and 367 relative to the inner hubs 361 and 365. A wrench 368 attaches to the outer hubs 363 and 367 to rotate the outer hubs 363 and 367."
3. A device for use in a surgical procedure in which an incision is made between two juxtaposed ribs of a patient, the device comprising:	See, e.g., figures 13, 14, 15, and 19.
a first arm member having a proximal end portion and a distal end portion, the distal end portion having a rib engaging blade, and the distal and proximal end portions being hingedly attached to each other;	Page 26, line 19-Page 27, line 3: " A pair of blade arms 338 and 340 include branch sections 346 and 348 that extend downwardly from central portions 339 and 341 and connect to blades 350 and 352. Stem portions 342 and 344 extend from the central portions 339 and 341 opposite the branch sections 346 and 348. The stem 342 extends between and is pivotally mounted to fingers 330A and 330B at a pivot 331. Likewise, stem 344 extends between and is pivotally mounted to fingers 332A and 332B at a pivot 333. As a result, the blade arms 338 and 340 rotate about an axis of rotation A_1 that is parallel to the rack 320."

a second arm member having a proximal end portion and a distal end portion, the distal end portion having a rib engaging blade and the distal and proximal end portions being hingedly attached to each other;	Page 26, line 19-Page 27, line 3: " A pair of blade arms 338 and 340 include branch sections 346 and 348 that extend downwardly from central portions 339 and 341 and connect to blades 350 and 352. Stem portions 342 and 344 extend from the central portions 339 and 341 opposite the branch sections 346 and 348. The stem 342 extends between and is pivotally mounted to fingers 330A and 330B at a pivot 331. Likewise, stem 344 extends between and is pivotally mounted to fingers 332A and 332B at a pivot 333. As a result, the blade arms 338 and 340 rotate about an axis of rotation A_1 that is parallel to the rack 320."
a mechanism that operably connects the first and the second arm members at the proximal end such that the arm members are movable toward and away from each other; and	Page 26, lines 9-18: " A fourth embodiment is shown in Figures 13-15. The access platform 310 of the fourth embodiment includes a spreader member 312 comprising a rack 320, a housing 322 slidably received over the rack 320, a pinion 324 rotatably retained in the housing 322 and a lever 326 connected to the pinion 324. A spreader base 328 is attached to one end of the rack 320. A pair of parallel spaced fingers 330A and 330B extend from the housing 322. Similarly, a pair of parallel spaced fingers 332A and 332B extend from the spreader base 328 and are positioned parallel to the fingers 330A and 330B extending from the housing 322;"
	Page 30, lines 15-22: " A pinion housing 422 is attached to the stachion rack 432 towards its upper end. A rack 420 is attached at one end to stachion rack 430 and is slidably received in the pinion housing 422. A pinion 424 driven by a lever 426 is rotatably retained in the pinion housing 422 and operably connected to the rack 420. The lever 426 is rotated to drive the pinion 424 along the rack 420 to spread apart the stachion racks 430 and 432 and effectively a patient's ribs."
a retractor lifting device, the device comprising a blade portion for engaging the blade of the second arm member, and a post member secured to an operating table on which the patient lies, and a handle section to which the blade section is movably attached, and a mechanism for moving the blade portion in an upward direction thereby lifting the blade of the second arm member which results in lifting a section of the patient's ribs.	Page 30, lines 5-14: " Turning to Figure 19, a seventh embodiment of the access platform 410 of the present invention is shown. The access platform 410 mounts to the table or rail via slides 438 and 440 that locked in place by positioners 450 and 452. The slides 438 and 440 rotatably retains pinions 442 and 444 driven by levers 446 and 448 and slidably received stachion racks 430 and 432. The stachion racks 430 and 432 include rack gears 434 and 436 that operably couple with pinions 442 and 444. The levers 446 and 448 are rotated to drive the pinions 442 and 444 along rack gears 434 and 436 to adjust the height of the stachion racks 430 and 432 relative to the table or patient."

4. The device of claim 3 wherein the mechanism includes a rack bar fixedly attached to the first arm member at one end and at another end movably engages the proximal end portion of the second arm member such that the second arm member moves away and toward the first arm member along the rack bar.	Page 26, lines 9-18: " A fourth embodiment is shown in Figures 13-15. The access platform 310 of the fourth embodiment includes a spreader member 312 comprising a rack 320, a housing 322 slidably received over the rack 320, a pinion 324 rotatably retained in the housing 322 and a lever 326 connected to the pinion 324. A spreader base 328 is attached to one end of the rack 320. A pair of parallel spaced fingers 330A and 330B extend from the housing 322. Similarly, a pair of parallel spaced fingers 332A and 332B extend from the spreader base 328 and are positioned parallel to the fingers 330A and 330B extending from the housing 322;"
	Page 30, lines 15-22: " A pinion housing 422 is attached to the stachion rack 432 towards its upper end. A rack 420 is attached at one end to stachion rack 430 and is slidably received in the pinion housing 422. A pinion 424 driven by a lever 426 is rotatably retained in the pinion housing 422 and operably connected to the rack 420. The lever 426 is rotated to drive the pinion 424 along the rack 420 to spread apart the stachion racks 430 and 432 and effectively a patient's ribs."
8. A minimally invasive coronary anastomosis procedure for a blocked coronary artery of a heart, the procedure comprising:	See, e.g., figures 1-2, 8-10, 11-12, 13-16, 19, and 20; page 11, lines 3-8: " Referring now in detail to the drawings, therein illustrated is a novel access platform that facilitates the dissection of an internal mammary artery (IMA), including both proximal and distal dissection, and access to the heart during a "beating heart" Coronary Artery Bypass Graph (CABG) procedure by increasing the surgeon's working space and visual access."
providing an incision in an intercostal space between two ribs of a patient, the incision providing access to a selected anastomosis site;	See, e.g., figure 1; page 11, lines 11-13: "An incision in the patient's chest P adjacent to the LIMA (shown in phantom) exposes an LAD artery on the exterior of the patient's heart."
inserting into the incision a first blade to engage a first rib and a second blade to engage a second rib, and spreading apart the first and second blades to spread apart the first and second ribs;	See, e.g., page 18, lines 10-19: "In operation, the blades 50 and 51 are positioned within the incision in the patient's chest P such that the vanes 52 and 53 slide under the patient's ribs R (see Figs. 6 and 7). The throats 54 and 55 of the blades 50 and 51 receive and substantially surround the opposing ribs proximal to the incision in the patient's chest P. Once the blades 50 and 51 are in position, the blades 50 and 51 are connected to the rest of the access platform 10 by inserting the stems 62 and 63 of the blade arms 56 and 57 into the sockets 34 and 35 in the torque bases 32 and 33;"
	Page 22, line 18-Page 23, line 3: "In operation, blades 140 and 141 are inserted in an incision in the patient's chest such that the blade vanes 142 and 143 slide under the patient's ribs and the recessed throats 144 and 145 of blades 140 and 141 receive the ribs that are proximal to the incision. After the blades 140 and 141 are properly positioned, the stems 152 and 153 of the blade arms 146 and 147 are inserted into the sockets 154 and 155 of the torsional members 130 and 131 to connect the blades 140 and 141 to the remainder of the access platform 110. Levers 126 and 125 are then rotated to drive the pinions 121 and 122 over the rack 120 to laterally retract the ribs;"

	Page 25, lines 16-24: "In operation, the blades 230 and 231 are inserted into the chest incision and positioned such that the vane sections 232 and 233 slide under the patient's ribs R and the recess throat sections 234 and 235 receive the patient's ribs R proximal to the incision. Once the blades 230 and 231 are properly in place, the stems 240 and 241 of the blade arms 236 and 237 are inserted into the sockets 217 and 219 of the pinion housings 216 and 218. Next, the levers 224 and 226 are rotated to the drive pinions 220 and 222 along the rack 214 to laterally retract the ribs;"
	Page 31, lines 5-10: "In operation, the access platform 410 is positioned such that the blades 370 and 372 can be inserted into an incision in a patient's chest and then attached to the blade arms 374 and 376. Once the blades 370 and 372 are positioned in the incision and attached to the blade arms 374 and 376, the lever 426 is rotated to spread the blades 370 and 372 and the patient's ribs apart;"
	Page 32, lines 8-13: "In operation, the blades 532 and 530 are inserted into an incision in the patient's chest and then the stems 526 and 528 of the blade arms 528 and 548 are inserted in the sockets 524 and 544. The lever 538 is rotated to drive the pinion 536 along the rack 520 until the blades 532 and 550 and the patient's ribs are positioned at a desired spacing."
lifting the second blade to offset the second blade and rib relative to the first blade and rib thereby exposing an internal mammary artery to direct visualization;	See, e.g., page 18, line 20-Page 19, line 16: "Next, the hub 14 of the spreader member 12 is rotated to laterally spread the spreader arms 18 and 19 apart until the blades 50 and 51 have retracted the patient's ribs R to a desired spacing. The support pads 80 and 81 are then lowered to rest on the patient's chest and locked in place with lock positioners 90 and 91. At this point, the torque bases 32 and 33 are rotated relative to the torsional members 30 and 31 to displace in an essentially vertical direction the blades 50 and 51, and ultimately the patient's ribs R, relative to each other. As the blade 51 is raised, the corresponding support pad 81 depresses the patient's sternum to further cause a greater deflection in the patient's rib cage and, thus, increase the "tunnel" effect. The elongated vane construction of the blades 50 and 51 advantageously enables the access platform 10 to vertically raise a plurality of the patient's ribs R to cause a greater "tunnel" effect under a patient's rib cage and, thus, increases the surgeon's working area and visual access to the IMA. The recessed throat construction of the blades 50 and 51 advantageously enables the access platform 10 to vertically displace the opposite rib that is proximal to the chest incision downwardly to further increase the surgeon's visual access. This combined motion helps to create an optimized tunnel;"
	Page 23, lines 3-15: "When a desired spacing between the retracted ribs is met, the support pads 160 and 161 are positioned on the chest of the patient, with support pad 160 being preferably positioned on the patient's sternum. The levers 138 and 139 then are rotated to drive pinions 136 and 137 to draw the curved racks 132 and 133 through the pinion housing 134 and 135 to vertically displace the blades 140 and 141 and the retracted ribs. As the blade 140 is retracted upwards the support pad 160 preferably depresses the sternum creating a greater deflection in the patient's rib cage and, thus, creating a greater "tunnel" effect underneath the patient's rib cage, to increase the surgeon's working space and visual access for dissection of the IMA;"

	Page 25, line 24-Page 26, line 4: "The "L"-shaped lever 256 is then rotated downwardly toward the patient's chest such that the slide portion 259 slides along the support pad 252 while the "L"-shaped lever 256 pivots about the pivot 258. As a result, one end of the rack 214 is raised to vertically offset blade 230 relative to 231;"
	Page 27, line 23-Page28, line 13: "In operation, the blade 384 is positioned such that the throat 388 captures the blade 350 or 352 of the access platform 310. As the throat 388 captures the blade 350 or 352 the elongated vane 386 extends under a plurality of the patient's ribs to be offset. The pivot base 377 and the pivots 378 and 380 enable the pry bar 370 to be adjustably positioned about two different axes of rotation. Once the blade 384 is positioned, the sternal pad 374 is adjustably located to atraumatically conform the pry bar 370 to the anatomy of the patient. Once the sternal pad 374 is in position, a handle 375, in the upper portion of the "S"-shaped body 372, is pulled to pivot the pry bar 370 about the sternal pad 374 and lift the blade 384 and the blade 350 or 352 of the access platform 310 to offset the patient's ribs and create a "tunnel" to increase the surgeon's working space and visual access for the dissection of the IMA;"
	Page 31, lines 11-14: " The blades 370 and 372 can be effectively offset by rotating the outer hubs 363 and 367 relative to the inner hubs 361 and 365. A wrench 368 attaches to the outer hubs 363 and 367 to rotate the outer hubs 363 and 367;"
	Page 32, lines 13-17: " A spring loaded lock lever 534 pivotally mounted to the housing 540 locks the housing 540 in place along the rack 520. The rack 520 is then lifted by the hand 552 to vertically displace or offset the blades 532 and 550 and the patient's ribs."
dissecting the internal mammary artery; and	See, e.g., page 20, lines 3-9: "In a first offset position, the blade 51 raises the retracted ribs and the blade 50 depresses the retracted ribs so that the surgeon can take down the proximal portion of the IMA. Next, the blades 50 and 51 are rotated to a second offset position wherein the blade 50 raises the retracted ribs and the blade 51 depresses the retracted ribs. In this offset position, the surgeon takes down the distal portion of the IMA;"
	Page 23, line 25-Page 26, line 4: "In a first offset position, the blade 141 would raise the retracted ribs and the blade 140 would depress the retracted ribs so that the surgeon can take down the proximal portion of the IMA. Next, the blades 140 and 141 are rotated to a second offset position wherein the blade 140 lifts the retracted ribs and the blade 141 depresses the retracted ribs. In this offset position, the surgeon takes down the distal portion of the IMA."
performing the anastomosis.	See, e.g., page 20, lines 9-13: "With the dissection of the IMA complete, the surgeon levels the blades 50 and 51 and then engages the heart stabilizer 67. With the heart stabilizer 67 engaged to minimize the movement of the heart, the surgeon performs an arteriotomy and an anastomosis;"
	Page 24, lines 8-10: " With the heart stabilizer 67 engaged to minimize the movement of the heart, the surgeon performs an arteriotomy and anastomosis."

9. The procedure of claim 8 wherein the patient is positioned on a surgical table, and wherein the second blade is lifted using a lifting mechanism that is mounted to the surgical table and extends upwardly to a position above the patient.	See, e.g., figure 19; Page 30, line 4-Page 31, line 14: " Turning to Figure 19, a seventh embodiment of the access platform 410 of the present invention is shown. The access platform 410 mounts to the table or rail via slides 438 and 440 that locked in place by positioners 450 and 452. The slides 438 and 440 rotatably retains pinions 442 and 444 driven by levers 446 and 448 and slidably received stachion racks 430 and 432. The stachion racks 430 and 432 include rack gears 434 and 436 that operably couple with pinions 442 and 444. The levers 446 and 448 are rotated to drive the pinions 442 and 444 along rack gears 434 and 436 to adjust the height of the stachion racks 430 and 432 relative to the table or patient. A pinion housing 422 is attached to the stachion rack 432 towards its upper end. A rack 420 is attached at one end to stachion rack 430 and is slidably received in the pinion housing 422. A pinion 424 driven by a lever 426 is rotatably retained in the pinion housing 422 and operably connected to the rack 420. The lever 426 is rotated to drive the pinion 424 along the rack 420 to spread apart the stachion racks 430 and 432 and effectively a patient's ribs.
	Torsional members 360 and 362 are attached to the top of the stachion racks 430 and 432. Blade arms 374 and 376 extend outwardly from torsional members and attach to blades 370 and 372. The torsional members comprise inner hubs 361 and 365 rotatably received in and operably connected to outer hubs 363 and 367. Locking levers 364 and 366 lock the outer hubs 363 and 367 in place relative to the inner hubs 361 and 365. In operation, the access platform 410 is positioned such that the blades 370 and 372 can be inserted into an incision in a patient's chest and then attached to the blade arms 374 and 376. Once the blades 370 and 372 are positioned in the incision and attached to the blade arms 374 and 376, the lever 426 is rotated to spread the blades 370 and 372 and the patient's ribs apart. The blades 370 and 372 can be effectively offset by rotating the outer hubs 363 and 367 relative to the inner hubs 361 and 365. A wrench 368 attaches to the outer hubs 363 and 367 to rotate the outer hubs 363 and 367."
10. The procedure of claim 8 and further including:	
Reducing movement of the heart;	See, e.g., page 20, lines 9-13: "With the dissection of the IMA complete, the surgeon levels the blades 50 and 51 and then engages the heart stabilizer 67. With the heart stabilizer 67 engaged to minimize the movement of the heart, the surgeon performs an arteriotomy and an anastomosis;"
	Page 24, lines 8-10: " With the heart stabilizer 67 engaged to minimize the movement of the heart, the surgeon performs an arteriotomy and anastomosis."
suturing the internal mammary artery to an incision made in the blocked artery while the movement of the heart reduced.	See, e.g., page 20, lines 9-13: "With the dissection of the IMA complete, the surgeon levels the blades 50 and 51 and then engages the heart stabilizer 67. With the heart stabilizer 67 engaged to minimize the movement of the heart, the surgeon performs an arteriotomy and an anastomosis;"

	Page 24, lines 8-10: " With the heart stabilizer 67 engaged to minimize the movement of the heart, the surgeon performs an arteriotomy and anastomosis."
11. A minimally invasive coronary anastomosis procedure for a blocked coronary artery of a heart, the procedure comprising:	See, e.g., figures 1-2, 8-10, 11-12, 13-16, 19, and 20; page 11, lines 3-8: " Referring now in detail to the drawings, therein illustrated is a novel access platform that facilitates the dissection of an internal mammary artery (IMA), including both proximal and distal dissection, and access to the heart during a "beating heart" Coronary Artery Bypass Graph (CABG) procedure by increasing the surgeon's working space and visual access."
providing an incision in an intercostal space between two juxtaposed ribs of a patient, the incision providing access to a selected anastomosis site on the blocked coronary artery;	See, e.g., figure 1; page 11, lines 11-13: "An incision in the patient's chest P adjacent to the LIMA (shown in phantom) exposes an LAD artery on the exterior of the patient's heart."
inserting a spreader device between the two juxtaposed ribs such that when the spreader device is operated, the ribs are spread apart widening the incision;	See, e.g., page 18, lines 10-19: "In operation, the blades 50 and 51 are positioned within the incision in the patient's chest P such that the vanes 52 and 53 slide under the patient's ribs R (see Figs. 6 and 7). The throats 54 and 55 of the blades 50 and 51 receive and substantially surround the opposing ribs proximal to the incision in the patient's chest P. Once the blades 50 and 51 are in position, the blades 50 and 51 are connected to the rest of the access platform 10 by inserting the stems 62 and 63 of the blade arms 56 and 57 into the sockets 34 and 35 in the torque bases 32 and 33;"
	Page 22, line 18-Page 23, line 3: "In operation, blades 140 and 141 are inserted in an incision in the patient's chest such that the blade vanes 142 and 143 slide under the patient's ribs and the recessed throats 144 and 145 of blades 140 and 141 receive the ribs that are proximal to the incision. After the blades 140 and 141 are properly positioned, the stems 152 and 153 of the blade arms 146 and 147 are inserted into the sockets 154 and 155 of the torsional members 130 and 131 to connect the blades 140 and 141 to the remainder of the access platform 110. Levers 126 and 125 are then rotated to drive the pinions 121 and 122 over the rack 120 to laterally retract the ribs;"
	Page 25, lines 16-24: "In operation, the blades 230 and 231 are inserted into the chest incision and positioned such that the vane sections 232 and 233 slide under the patient's ribs R and the recess throat sections 234 and 235 receive the patient's ribs R proximal to the incision. Once the blades 230 and 231 are properly in place, the stems 240 and 241 of the blade arms 236 and 237 are inserted into the sockets 217 and 219 of the pinion housings 216 and 218. Next, the levers 224 and 226 are rotated to the drive pinions 220 and 222 along the rack 214 to laterally retract the ribs;"
	Page 31, lines 5-10: "In operation, the access platform 410 is positioned such that the blades 370 and 372 can be inserted into an incision in a patient's chest and then attached to the blade arms 374 and 376. Once the blades 370 and 372 are positioned in the incision and attached to the blade arms 374 and 376, the lever 426 is rotated to spread the blades 370 and 372 and the patient's ribs apart;"

	Page 32, lines 8-13: "In operation, the blades 532 and 530 are inserted into an incision in the patient's chest and then the stems 526 and 528 of the blade arms 528 and 548 are inserted in the sockets 524 and 544. The lever 538 is rotated to drive the pinion 536 along the rack 520 until the blades 532 and 550 and the patient's ribs are positioned at a desired spacing."
dissecting an internal mammary artery;	See, e.g., page 20, lines 3-9: "In a first offset position, the blade 51 raises the retracted ribs and the blade 50 depresses the retracted ribs so that the surgeon can take down the proximal portion of the IMA. Next, the blades 50 and 51 are rotated to a second offset position wherein the blade 50 raises the retracted ribs and the blade 51 depresses the retracted ribs. In this offset position, the surgeon takes down the distal portion of the IMA;"
	Page 23, line 25-Page 26, line 4: "In a first offset position, the blade 141 would raise the retracted ribs and the blade 140 would depress the retracted ribs so that the surgeon can take down the proximal portion of the IMA. Next, the blades 140 and 141 are rotated to a second offset position wherein the blade 140 lifts the retracted ribs and the blade 141 depresses the retracted ribs. In this offset position, the surgeon takes down the distal portion of the IMA."
reducing movement of the heart;	See, e.g., page 20, lines 9-13: "With the dissection of the IMA complete, the surgeon levels the blades 50 and 51 and then engages the heart stabilizer 67. With the heart stabilizer 67 engaged to minimize the movement of the heart, the surgeon performs an arteriotomy and an anastomosis;"
	Page 24, lines 8-10: " With the heart stabilizer 67 engaged to minimize the movement of the heart, the surgeon performs an arteriotomy and anastomosis."
incising the blocked coronary artery downstream from the blockage; and	Page 1, line 25-Page 2, line 3: " In the CABG procedure, the surgeon either removes a portion of a vein from another part of the body to use as a graft and installs the graft at points that bypass the obstruction to restore normal blood flow to the heart or detaches one end of an artery and connects that end past the obstruction while leaving the other end attached to the arterial supply to restore normal;"
	See, e.g., page 20, lines 9-13: "With the dissection of the IMA complete, the surgeon levels the blades 50 and 51 and then engages the heart stabilizer 67. With the heart stabilizer 67 engaged to minimize the movement of the heart, the surgeon performs an arteriotomy and an anastomosis;"
	Page 24, lines 8-10: " With the heart stabilizer 67 engaged to minimize the movement of the heart, the surgeon performs an arteriotomy and anastomosis."

suturing the dissected internal mammary artery to the incision on the blocked coronary artery at the selected anastomosis site.	Page 2, line 18-Page 3, line 3: "The CABG procedure further requires that a connection for the flow of blood be established between two points that "by pass" a diseased area and restore an adequate blood flow. Typically, one end of a graft is sewn to the aorta, while the other end of the graft is sewn to a coronary artery, such as the left anterior descending (LAD) artery that provides blood flow to the main muscles of the heart. This procedure is known as a "free bypass graft." Alternatively, the IMA pedicle is dissected off of the chest wall, while still attached to its arterial supply, and attached to the LAD past the obstruction. This procedure is known as an "in situ bypass graft.";"
	See, e.g., page 20, lines 9-13: "With the dissection of the IMA complete, the surgeon levels the blades 50 and 51 and then engages the heart stabilizer 67. With the heart stabilizer 67 engaged to minimize the movement of the heart, the surgeon performs an arteriotomy and an anastomosis;"
	Page 24, lines 8-10: " With the heart stabilizer 67 engaged to minimize the movement of the heart, the surgeon performs an arteriotomy and anastomosis."
12. The procedure of claim 11 wherein the patient is positioned on a surgical table, and wherein the spreader device is lifted using a lifting mechanism that is mounted to the surgical table and extends upwardly to a position above the patient.	See, e.g., figure 19; Page 30, line 4-Page 31, line 14: " Turning to Figure 19, a seventh embodiment of the access platform 410 of the present invention is shown. The access platform 410 mounts to the table or rail via slides 438 and 440 that locked in place by positioners 450 and 452. The slides 438 and 440 rotatably retains pinions 442 and 444 driven by levers 446 and 448 and slidably received stachion racks 430 and 432. The stachion racks 430 and 432 include rack gears 434 and 436 that operably couple with pinions 442 and 444. The levers 446 and 448 are rotated to drive the pinions 442 and 444 along rack gears 434 and 436 to adjust the height of the stachion racks 430 and 432 relative to the table or patient. A pinion housing 422 is attached to the stachion rack 432 towards its upper end. A rack 420 is attached at one end to stachion rack 430 and is slidably received in the pinion housing 422. A pinion 424 driven by a lever 426 is rotatably retained in the pinion housing 422 and operably connected to the rack 420. The lever 426 is rotated to drive the pinion 424 along the rack 420 to spread apart the stachion racks 430 and 432 and effectively a patient's ribs.
	Torsional members 360 and 362 are attached to the top of the stachion racks 430 and 432. Blade arms 374 and 376 extend outwardly from torsional members and attach to blades 370 and 372. The torsional members comprise inner hubs 361 and 365 rotatably received in and operably connected to outer hubs 363 and 367. Locking levers 364 and 366 lock the outer hubs 363 and 367 in place relative to the inner hubs 361 and 365. In operation, the access platform 410 is positioned such that the blades 370 and 372 can be inserted into an incision in a patient's chest and then attached to the blade arms 374 and 376. Once the blades 370 and 372 are positioned in the incision and attached to the blade arms 374 and 376, the lever 426 is rotated to spread the blades 370 and 372 and the patient's ribs apart. The blades 370 and 372 can be effectively offset by rotating the outer hubs 363 and 367 relative to the inner hubs 361 and 365. A wrench 368 attaches to the outer hubs 363 and 367 to rotate the outer hubs 363 and 367."

13. The procedure of claim 11 wherein the dissected internal mammary artery is sutured to the occluded coronary artery.	See, e.g., page 20, lines 9-13: "With the dissection of the IMA complete, the surgeon levels the blades 50 and 51 and then engages the heart stabilizer 67. With the heart stabilizer 67 engaged to minimize the movement of the heart, the surgeon performs an arteriotomy and an anastomosis;"
	Page 24, lines 8-10: " With the heart stabilizer 67 engaged to minimize the movement of the heart, the surgeon performs an arteriotomy and anastomosis."
14. A device for use in a surgical procedure in which an incision is made between two juxtaposed ribs of a patient, the device comprising:	See, e.g., figures 13, 14, 15, and 19.
a first arm member having a proximal end portion and a distal end portion, the distal end portion having a rib engaging blade, and the distal and proximal end portions being hingedly attached to each other;	Page 26, line 19-Page 27, line 3: " A pair of blade arms 338 and 340 include branch sections 346 and 348 that extend downwardly from central portions 339 and 341 and connect to blades 350 and 352. Stem portions 342 and 344 extend from the central portions 339 and 341 opposite the branch sections 346 and 348. The stem 342 extends between and is pivotally mounted to fingers 330A and 330B at a pivot 331. Likewise, stem 344 extends between and is pivotally mounted to fingers 332A and 332B at a pivot 333. As a result, the blade arms 338 and 340 rotate about an axis of rotation A_1 that is parallel to the rack 320."
a second arm member having a proximal end portion and a distal end portion, the distal end portion having a rib engaging blade and the distal and proximal end portions being hingedly attached to each other;	Page 26, line 19-Page 27, line 3: " A pair of blade arms 338 and 340 include branch sections 346 and 348 that extend downwardly from central portions 339 and 341 and connect to blades 350 and 352. Stem portions 342 and 344 extend from the central portions 339 and 341 opposite the branch sections 346 and 348. The stem 342 extends between and is pivotally mounted to fingers 330A and 330B at a pivot 331. Likewise, stem 344 extends between and is pivotally mounted to fingers 332A and 332B at a pivot 333. As a result, the blade arms 338 and 340 rotate about an axis of rotation A_1 that is parallel to the rack 320."
a mechanism that operably connects the first and the second arm members at the proximal end such that the arm members are movable toward and away from each other; and	Page 26, lines 9-18: " A fourth embodiment is shown in Figures 13-15. The access platform 310 of the fourth embodiment includes a spreader member 312 comprising a rack 320, a housing 322 slidably received over the rack 320, a pinion 324 rotatably retained in the housing 322 and a lever 326 connected to the pinion 324. A spreader base 328 is attached to one end of the rack 320. A pair of parallel spaced fingers 330A and 330B extend from the housing 322. Similarly, a pair of parallel spaced fingers 332A and 332B extend from the spreader base 328 and are positioned parallel to the fingers 330A and 330B extending from the housing 322;"
	Page 30, lines 15-22: " A pinion housing 422 is attached to the stachion rack 432 towards its upper end. A rack 420 is attached at one end to stachion rack 430 and is slidably received in the pinion housing 422. A pinion 424 driven by a lever 426 is rotatably retained in the pinion housing 422 and operably connected to the rack 420. The lever 426 is rotated to drive the pinion 424 along the rack 420 to spread apart the stachion racks 430 and 432 and effectively a patient's ribs."

a rib offsetting device, the device being operably coupled to the blade of the second arm member, and adapted to move the blade portion of the second arm member in an upward direction thereby lifting the blade of the second arm member which results in lifting a section of the patient's ribs.	Page 30, lines 5-14: " Turning to Figure 19, a seventh embodiment of the access platform 410 of the present invention is shown. The access platform 410 mounts to the table or rail via slides 438 and 440 that locked in place by positioners 450 and 452. The slides 438 and 440 rotatably retains pinions 442 and 444 driven by levers 446 and 448 and slidably received stachion racks 430 and 432. The stachion racks 430 and 432 include rack gears 434 and 436 that operably couple with pinions 442 and 444. The levers 446 and 448 are rotated to drive the pinions 442 and 444 along rack gears 434 and 436 to adjust the height of the stachion racks 430 and 432 relative to the table or patient."
15. The device of claim 14 wherein the mechanism includes a rack bar fixedly attached to the first arm member at one end and at another end movably engages the proximal end portion of the second arm member such that the second arm member moves away and toward the first arm member along the rack bar.	Page 26, lines 9-18: " A fourth embodiment is shown in Figures 13-15. The access platform 310 of the fourth embodiment includes a spreader member 312 comprising a rack 320, a housing 322 slidably received over the rack 320, a pinion 324 rotatably retained in the housing 322 and a lever 326 connected to the pinion 324. A spreader base 328 is attached to one end of the rack 320. A pair of parallel spaced fingers 330A and 330B extend from the housing 322. Similarly, a pair of parallel spaced fingers 332A and 332B extend from the spreader base 328 and are positioned parallel to the fingers 330A and 330B extending from the housing 322;"
	Page 30, lines 15-22: " A pinion housing 422 is attached to the stachion rack 432 towards its upper end. A rack 420 is attached at one end to stachion rack 430 and is slidably received in the pinion housing 422. A pinion 424 driven by a lever 426 is rotatably retained in the pinion housing 422 and operably connected to the rack 420. The lever 426 is rotated to drive the pinion 424 along the rack 420 to spread apart the stachion racks 430 and 432 and effectively a patient's ribs."